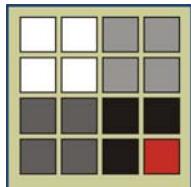


Social and Economic Assessment for Michigan's State Forests

**Prepared for: Michigan Department of Natural Resources
Forest, Mineral, and Fire Management Division**

Lansing, Michigan

September 5, 2006



**Prepared by:
Tessa Systems, LLC
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Preface

Public Act 125 of 2004, Section 52505, requires the Michigan Department of Natural Resources (MiDNR) to seek and maintain third-party sustainable forestry certification. Forest certification requires that MiDNR forest management plans take into consideration social and economic parameters that affect future forest management operations. Currently, the MiDNR is preparing a statewide forest management plan, and each of three eco-teams are drafting ecoregional management plans. The social and economic information provided in this report will be used to assess current social and economic conditions and to develop future management directions within each of the plans.

The report focuses primarily on three ecoregions: the Western Upper Peninsula, Eastern Upper Peninsula, and Northern Lower Peninsula as defined by the MiDNR along county boundaries. It covers social and economic conditions within these ecoregions in aggregate and on a county-level basis. As a result data for the areas in and around Michigan state forests are highlighted.

The "Social and Economic Assessment for the Michigan National Forests" (July 25, 2003), by Larry Leefers, Karen Potter-Witter, and Maureen McDonough from Michigan State University, provides a general model for this report.

The assessment report is based on secondary data. No primary data collection was done. MiDNR personnel provided unpublished data from MiDNR records. The report presents analyses of existing data and discusses relationships and trends in the variables of interest, and contains some projections based on existing literature.

The authors would like to especially acknowledge Lawrence Pedersen and Thomas Haxby of the MiDNR for their cooperation and assistance in this project. We greatly appreciate the assistance of many individuals throughout the MiDNR who provided specific data: Jason Bau, Rick Bresnahan, Steve DeBrabander, Bob DeVilles, Lisa Dygert, Brian Frawley, Tom Hoan, Mike Koss, Susan Krusik, Lt. Tom Lennox, Mark MacKay, Pat Murley, David Price, Jim Radabaugh, Brandon Reed, William Schmidt, Jason Stephens, Anna Sylvester, Ada Takacs, and Eleanora Wehrwein.

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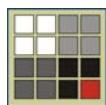
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Chapter 1. Introduction

Historical Context

Natural resources have been a foundation of life in Michigan since post-glacial immigration into the region by early hunters and gatherers. Indigenous people used forest plants and animals in many ways; their cultures adapted to use forest resources over hundreds of generations (Cleland 1983, Dickmann and Leefers 2003). Indigenous societies in the upper Great Lakes cultivated crops, used fire as a management tool, and subsisted with hunting and gathering. There were about 15,000 indigenous people in what we now call Michigan by the time European explorers arrived in the early 1600s (Public Sector Consultants, Inc. 2002). At the time, the landscape was influenced by Algonquin tribes, especially through the use of fire (MiDNR 2006). Some of the first European immigrants were fur traders and missionaries, mostly from France. British and colonial immigrants, in time, supplanted the French, and the land and its riches became central to this migration. After the United States gained independence from Great Britain, the Northwest Territory including Michigan began to develop. Michigan was established as a territory in 1805. Surveying the area was essential for settlement, and the General Land Office began surveying in Lower Michigan in 1816 and in Upper Michigan in 1840. The survey was completed in 1856 (MiDNR 2006).

Statehood was achieved in 1837, and exploitation of natural resources became commonplace for the remainder of the century. Resource extraction from the region has a long history: the first lumber from Michigan's pineries was shipped to eastern markets in 1836; oil was found in Macomb County in the 1830s; and copper and iron ore were discovered in Upper Michigan in the 1840s (Public Sector Consultants, Inc. 2002). The workers and infrastructure needed to extract these resources followed. During that period, cutover lands were settled and many were abandoned; fire ravaged large areas. By the beginning of the 20th century, conservation of natural resources became an important social movement due to the rampant exploitation occurring and the efforts of early conservation leaders. Michigan's first state forest reserves, Reserves No. 1 and No. 2, were created in Roscommon and Crawford Counties in 1903; federal forest reserves followed soon thereafter.

Now, state forests have been part of the Michigan's forested landscape for over a century. Use of the forest and forest resources evolved. Market hunting was supplanted by recreational hunting. Many abandoned lands became public forests. Fire suppression, with a strong boost from the Civilian Conservation Corps, became the norm, and forest management expanded to encompass multiple uses of the forests (MiDNR 2006).

Growth of national forest ownership was concurrent with expansion of the state forests. The Michigan National Forest was established in 1909 in an area near the first state forest reserves; it was expanded and renamed the Huron National Forest in 1928. The Marquette National Forest in the eastern Upper Michigan also was created in 1909, and the Hiawatha and Ottawa National Forests were established in 1931 when the federal government began purchasing mostly cutover lands—the Marquette was consolidated with the Hiawatha. The Manistee was created in 1938 and combined with the Huron in 1945.

The modest start for state forests in 1903 has greatly expanded, especially with land purchases during and shortly after the Great Depression. The cutover, sandy pine lands were the beginning for both state and federal forest landholdings that now cover over 6 million acres in Michigan. The MiDNR lands are well known for their diverse wildlife habitats, protected scenic and natural areas, excellent recreational opportunities, and role in supporting Michigan's forest products industries. This mixed, multiple-use approach is the hallmark of American and Michigan forestry. It also provides the basis for pursuing different societal goals which are fashioned by dynamic social and economic factors.

The MiDNR's Western Upper Peninsula, Eastern Upper Peninsula, and Northern Lower Peninsula Eco-Teams are developing regional ecosystem management plans. Natural resource managers recognize the importance of understanding the social and economic context in which they operate. This social and economic assessment has been undertaken to facilitate plan development by providing a coordinated report of conditions and trends for all three Ecoregions.

Purpose

The purpose of this report is to assess ecoregional conditions from a social and economic perspective for the Western Upper Peninsula, Eastern Upper Peninsula, and Northern Lower Peninsula. In 2006, the MiDNR prepared a statewide forest management plan (MiDNR 2006), and each of the three established Eco-teams is in the process of drafting ecoregional management plans. The social and economic information provided by this report will be used to assess current conditions and in developing future management directions within each of the plans. Information regarding ecoregions in southern Lower Michigan are provided only in the summary of statewide data.

The principal focus is Michigan's state forests and adjacent impact areas surrounding state forests. The report provides a social and economic context for regional planning for the Michigan Department of Natural Resources. This report is a starting point for information and data compilation; it will be supplemented as new information and data become available.

Outcomes of the report will be (1) a social and economic context for ecoregions, (2) a better understanding of the relationship between public lands and communities and (3) an assemblage of information needed to evaluate trade-offs between options for future forest management.

Scope

Several considerations must be addressed when defining the scope of a social and economic assessment. First, there are broad-scale geographic concerns. For purposes of this assessment, the principal lands of interest are state forest lands within ecoregions in northern Michigan. Because comparisons between forest-level and state-level conditions and trends are desired, the geographic scope of the assessment encompasses the entire state of Michigan and also the ecoregions near the state forests. Ecoregional boundaries differ depending upon the ecological classification system and scale which is used. The MiDNR has differentiated five ecoregions: Western Upper Michigan (WUP), Eastern Upper Michigan (EUP), Northern Lower Michigan (NLP), Southwest Lower Michigan (SWLP), and Southeast Lower Michigan (SELP) (MiDNR 2006). The first three ecoregions are the focus in this report; taken together, these will be referred to as "northern Michigan." And combined, SWLP and SELP are called the Southern Lower Michigan (SLP). Second, social and economic data are often collected at different geographic scales (e.g., counties, minor civil divisions), and the boundaries do not perfectly coincide with ecological boundaries (Figure 1.1). The MiDNR selected the counties for inclusion in the ecoregional summaries developed for this report; they account for 45 of Michigan's 83 counties (Figure 1.2, Table 1.1). Moreover, due to the large number of possible comparisons, the MiDNR identified the most relevant variables for inclusion in this report. Only secondary data are used for economic and social variables.

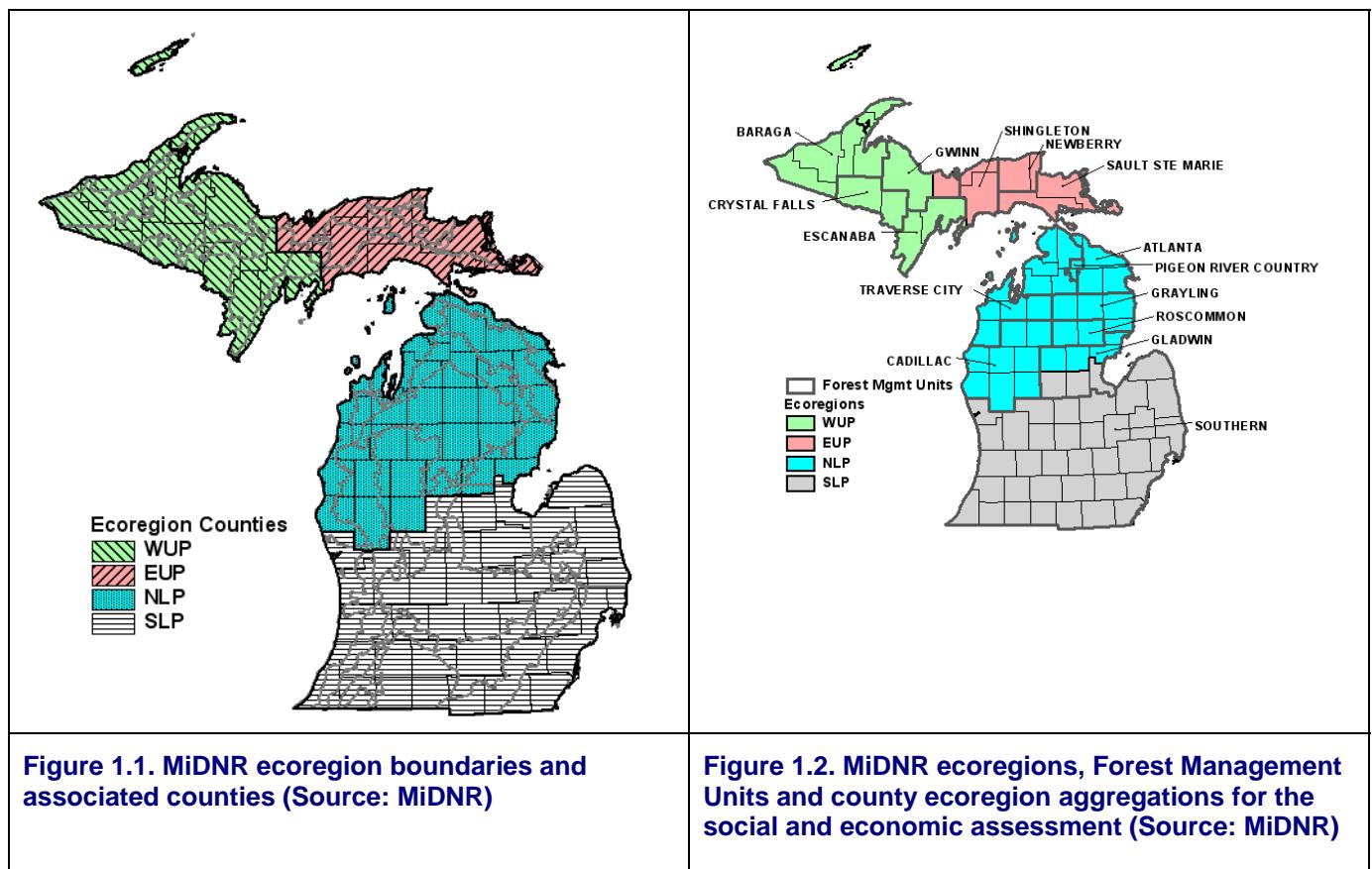


Figure 1.1. MiDNR ecoregion boundaries and associated counties (Source: MiDNR)

Figure 1.2. MiDNR ecoregions, Forest Management Units and county ecoregion aggregations for the social and economic assessment (Source: MiDNR)

Table 1.1. Michigan ecoregion counties (Source: MiDNR)

Western Upper Peninsula	Eastern Upper Peninsula	Northern Lower Peninsula	
Baraga	Alger	Alcona	Leelanau
Delta	Chippewa	Alpena	Manistee
Dickinson	Luce	Antrim	Mason
Gogebic	Mackinac	Arenac	Mecosta
Houghton	Schoolcraft	Benzie	Missaukee
Iron		Charlevoix	Montmorency
Keweenaw		Cheboygan	Newaygo
Marquette		Clare	Oceana
Menominee		Crawford	Ogemaw
Ontonagon		Emmet	Osceola
		Gladwin	Oscoda
		Grand Traverse	Otsego
		Iosco	Presque Isle
		Kalkaska	Roscommon
		Lake	Wexford

State forest lands are intermingled with private lands and communities within the ecoregions (Table 1.2). State forests account for 1 out of every 10 acres in Michigan, but they are much more concentrated in the EUP and NLP. State forest area is almost evenly split between the NLP and the Upper Peninsula (WUP and EUP).

Table 1.2. Total land, MiDNR, and state forest area by ecoregion (Source: MiDNR)

Ecoregion	Land Area	MiDNR Ownership	MiDNR Ownership	State Forests	State Forests	State Forests
	Acres (1000s)	Acres (1000s)	Percent of Area	Acres (1000s)	Percent of Area	Percent of MiDNR
Western Upper Peninsula	6,937	935	13.5	857	12.4	91.7
Eastern Upper Peninsula	3,572	1,103	30.9	1,054	29.5	95.6
Northern Lower Peninsula	10,359	2,063	19.9	1,981	19.1	96.0
Michigan	36,358	4,532	12.5	3,938	10.8	86.9

Note: Southern Lower Peninsula totals are included in Michigan totals. State forest area for Isabella and Midland counties are included in the Southern Lower Peninsula.

Approach

The MiDNR, using a process similar to one adopted by the Michigan national forests (Leefers et al. 2003), identified six broad categories of interest for the assessment:

- Demographic patterns and trends
- Relationships with communities
- Economic vitality and dependence
- Natural resources production and economic contributions
- Outdoor recreation
- Other forest uses and values

These categories are described briefly below and discussed in depth in Sections 2-7.

Category 1: Demographic patterns and trends. These factors (e.g., population attributes) address questions raised about the characteristics of people living near state forests and changes in this population over time. Resident and seasonal populations are included. In aggregate, these variables provide a context for ecoregional forest planning. “Lifestyle segments” may be derived from these data.

Category 2: Relationships with communities. Relationships between communities and ecoregions are identified through descriptions of formal and informal institutional relationships. Changes in community expectations from the forest and potential community conflicts related to these changes are addressed through demographic variables in Category 1 above as well as assessments of community perceptions of change. Land ownership patterns and the local land-use policy environment are addressed.

Category 3 Economic vitality and dependence. These variables provide the basic information for addressing the concerns related to economic sustainability. They provide a context for the economic well being of residents in the ecoregions directly affected by the state forests. In addition, economic measures of the role of the state forests are presented.

Category 4: Natural resources production and economic contributions. These variables relate to timber harvesting, mineral extraction and other commodities and the role of the state forests in sustainable production of other market goods. Physical and economic measures of this role are presented.

Category 5: Outdoor recreation. Outdoor recreation is clearly an important use of state forests including demand for specific activities, distribution of land, water and facilities available for activities.

Category 6: Other forest uses and values. "Other forest uses" include gathering of special forest products and conservation of traditional and/or sacred use sites.

Background information and data related to each of these categories are compiled and presented in separate sections of this report. Because counties are used as the building blocks for summarizing ecoregional information, standard data from the U.S. Census Bureau, the MiDNR, and other government agencies often can be summarized for the ecoregions. In many cases, data on communities, outdoor recreation, and other forest uses and values were derived from independent studies in areas proximate to the ecoregions. Scientists conducted these studies for varied purposes, and data are not always consistent across or available for all ecoregions. Additional data needs are presented in Section 8.

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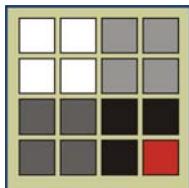
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Social and Economic Assessment for Michigan's State Forests

APPENDIX

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